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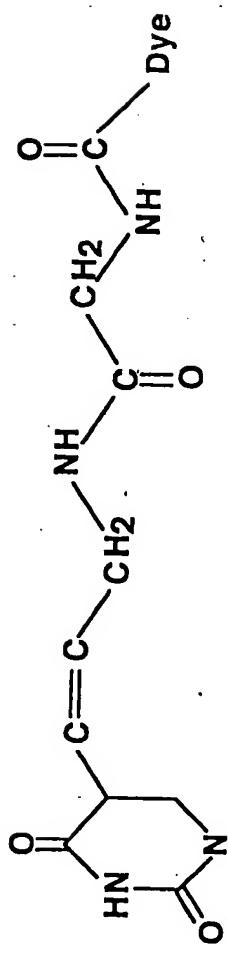
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Tetraglycyl linker

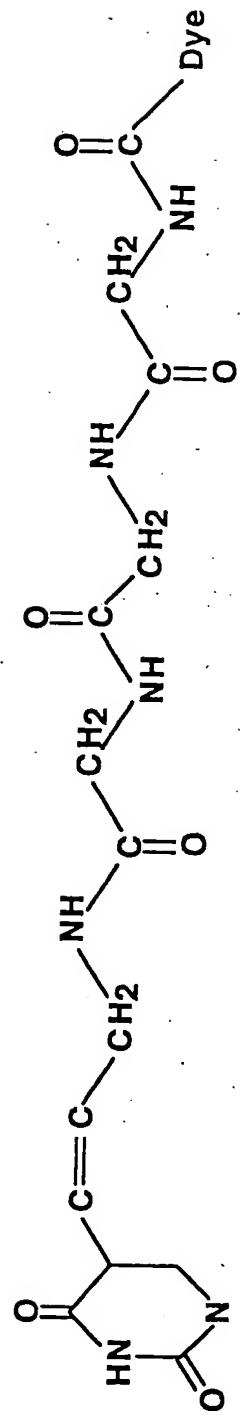
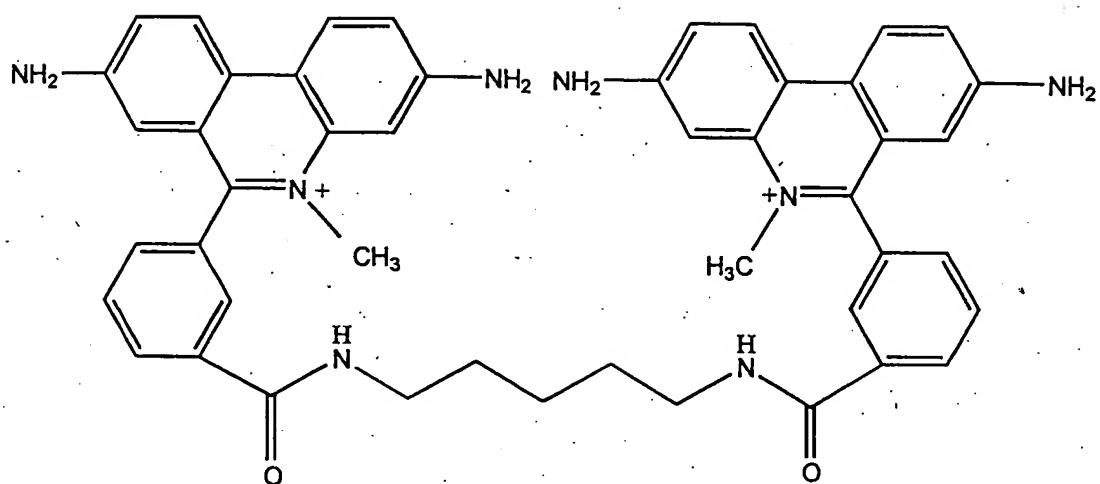
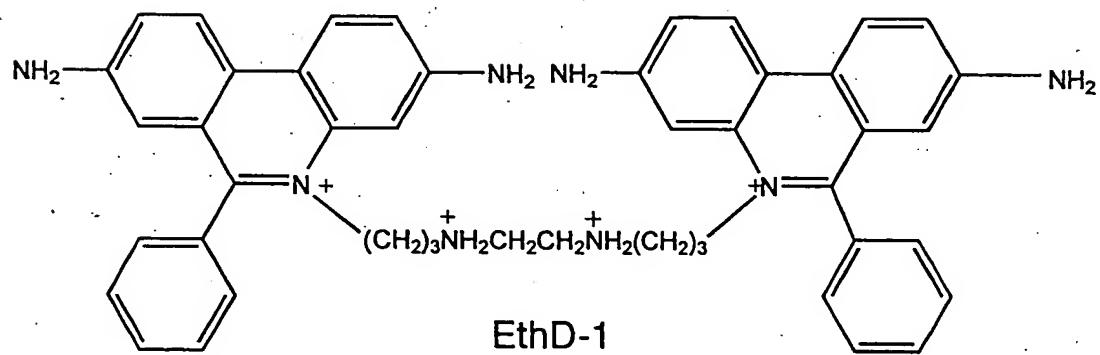


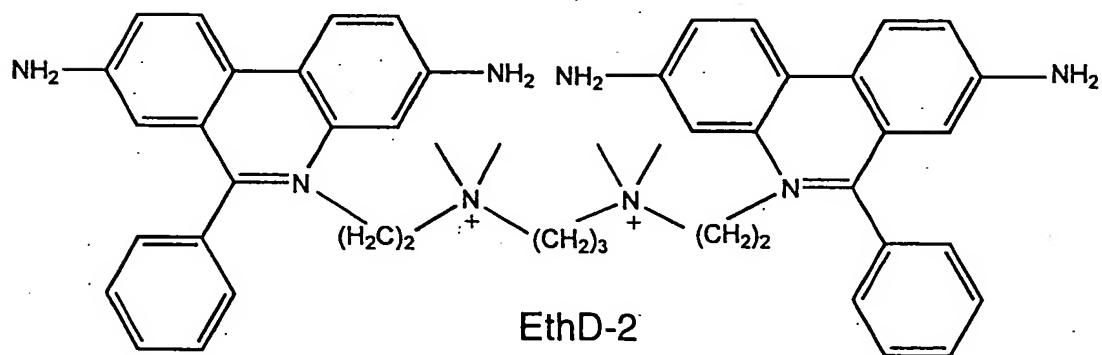
Figure 1



meta-EthD



EthD-1



EthD-2

Figure 2

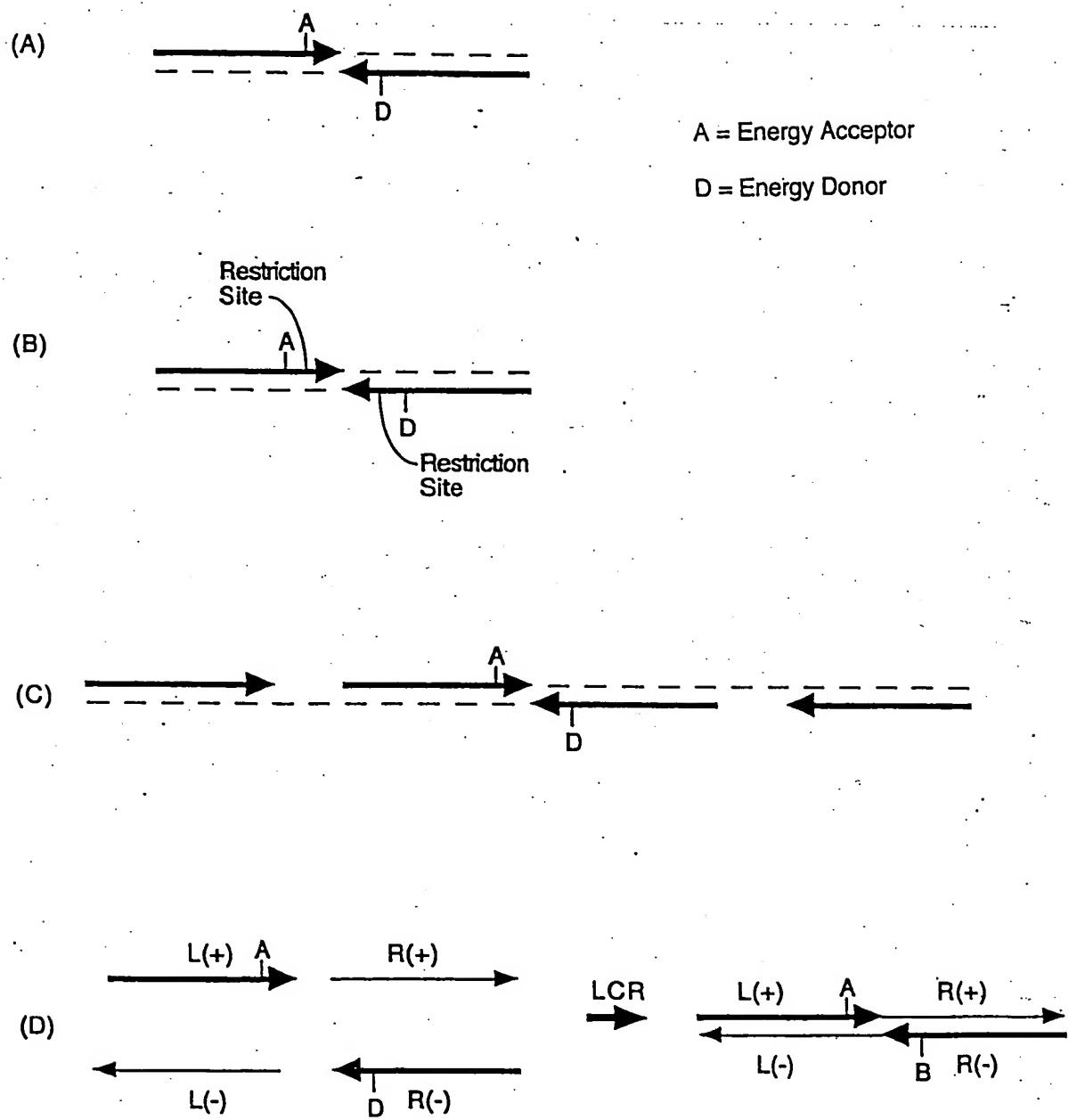


Figure 3

Target Sequence

—GCGACCTGCGAATGCTATGGATCAGGCTAGCCA—
—CGCTGGACGCTTACGATAACCTAGTCCGATCGGT—

(A)

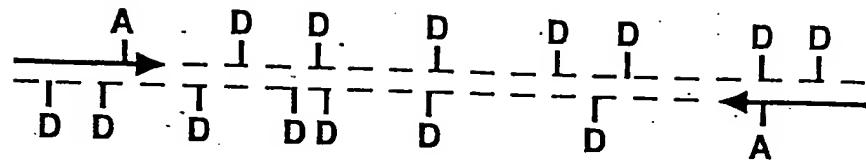
Donor
→
GCGACCTGCGAATGCTATggatcaggctagcca
cgctggacgcttacgataCCTAGTCCGATCGGT
←
Acceptor

(B)

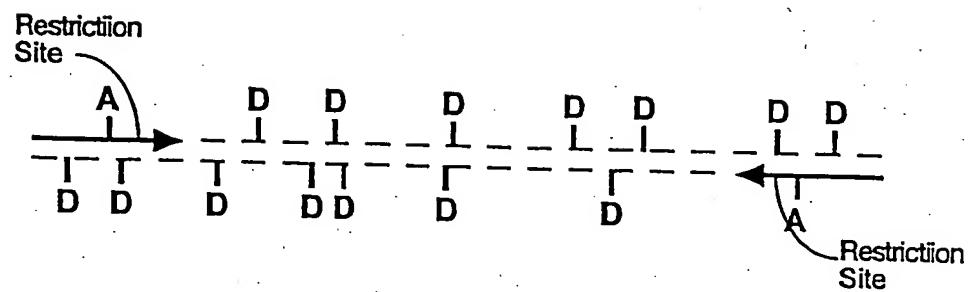
Donor
→
GCGACCTGCGAATGCTATggatcaggctagcca
cgctggacgcttacgataacctAGTCCGATCGGT
←
Acceptor

Figure 4

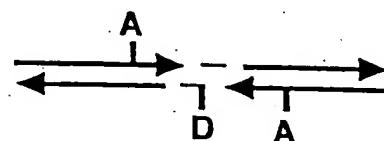
(A) PCR



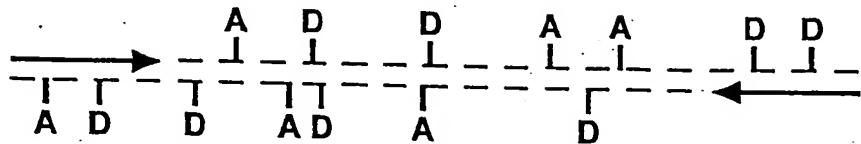
(B) SDA



(C) GAP-LCR



(D) PCR



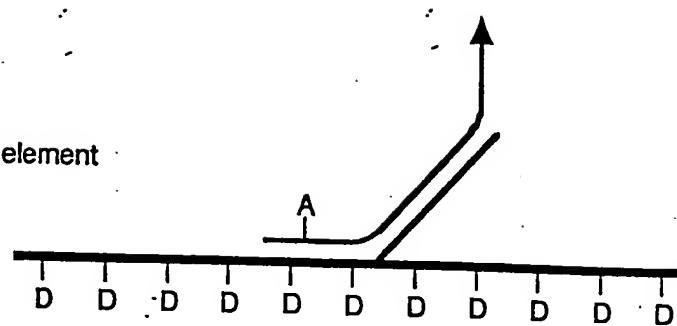
A = Energy Acceptor

Figure 5

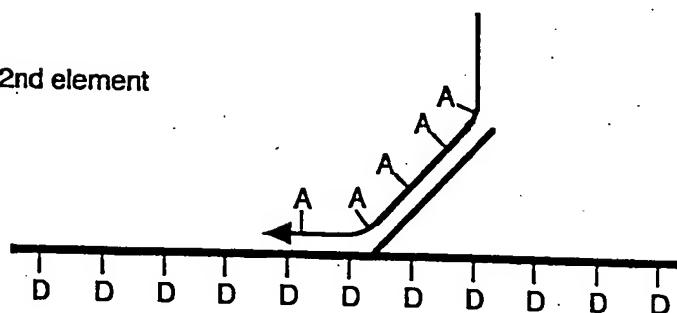
D = Energy Donor

5/27/1

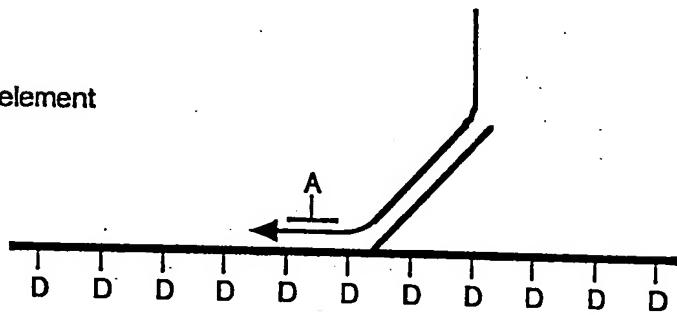
(A) Primer with 2nd element



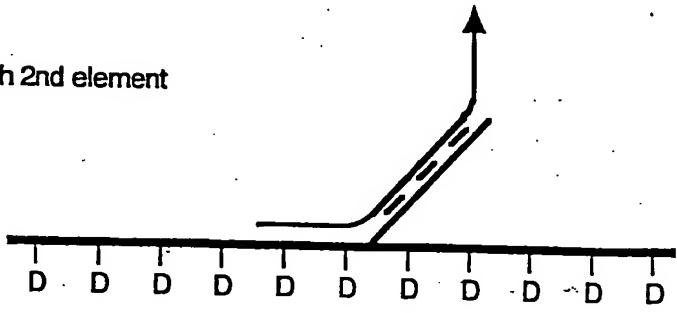
(B) Nucleotide with 2nd element



(B) Probe with 2nd element



(B) Intercalators with 2nd element



D = Energy Donor
A = Energy Acceptor

Figure 6

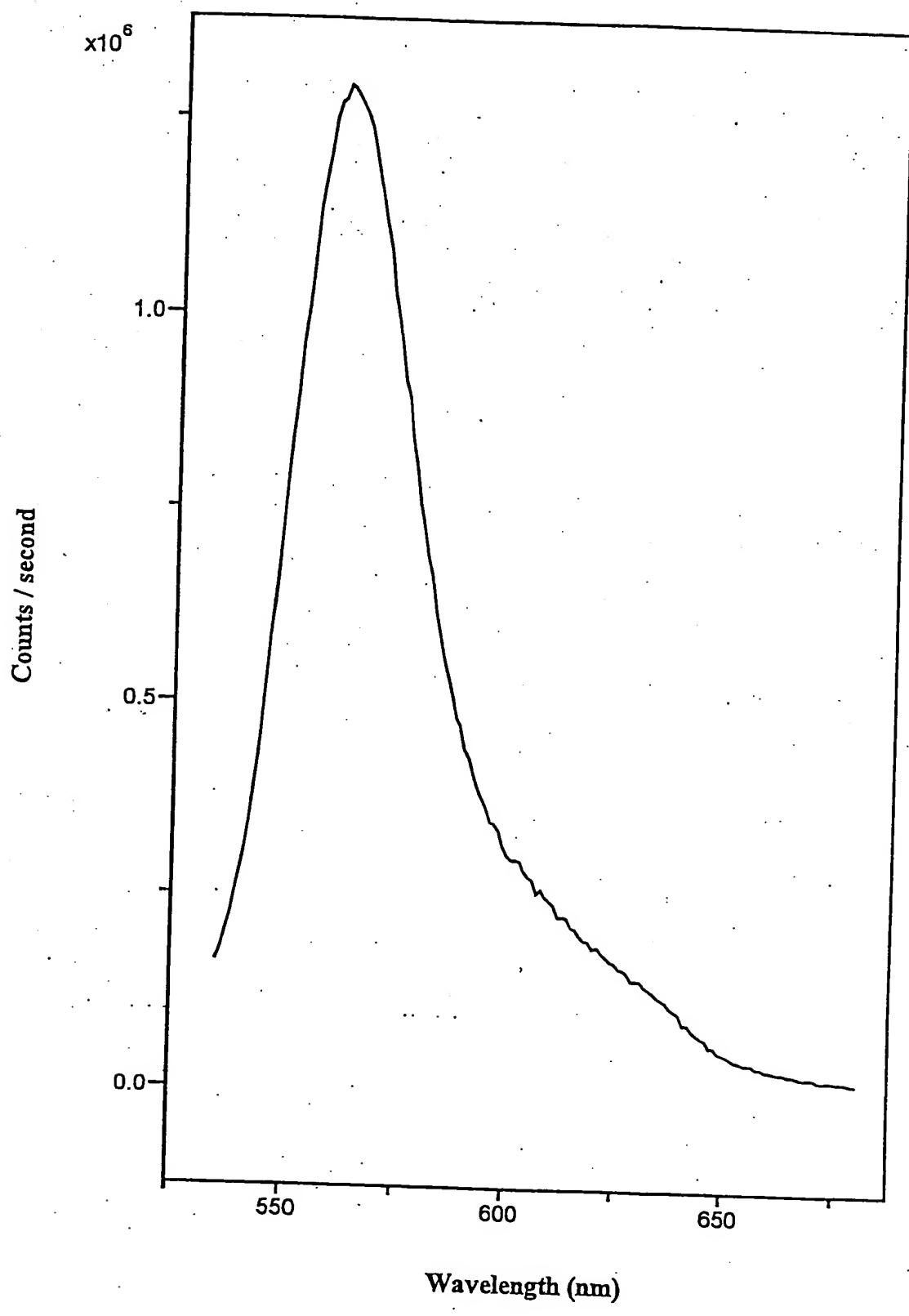


Figure 7

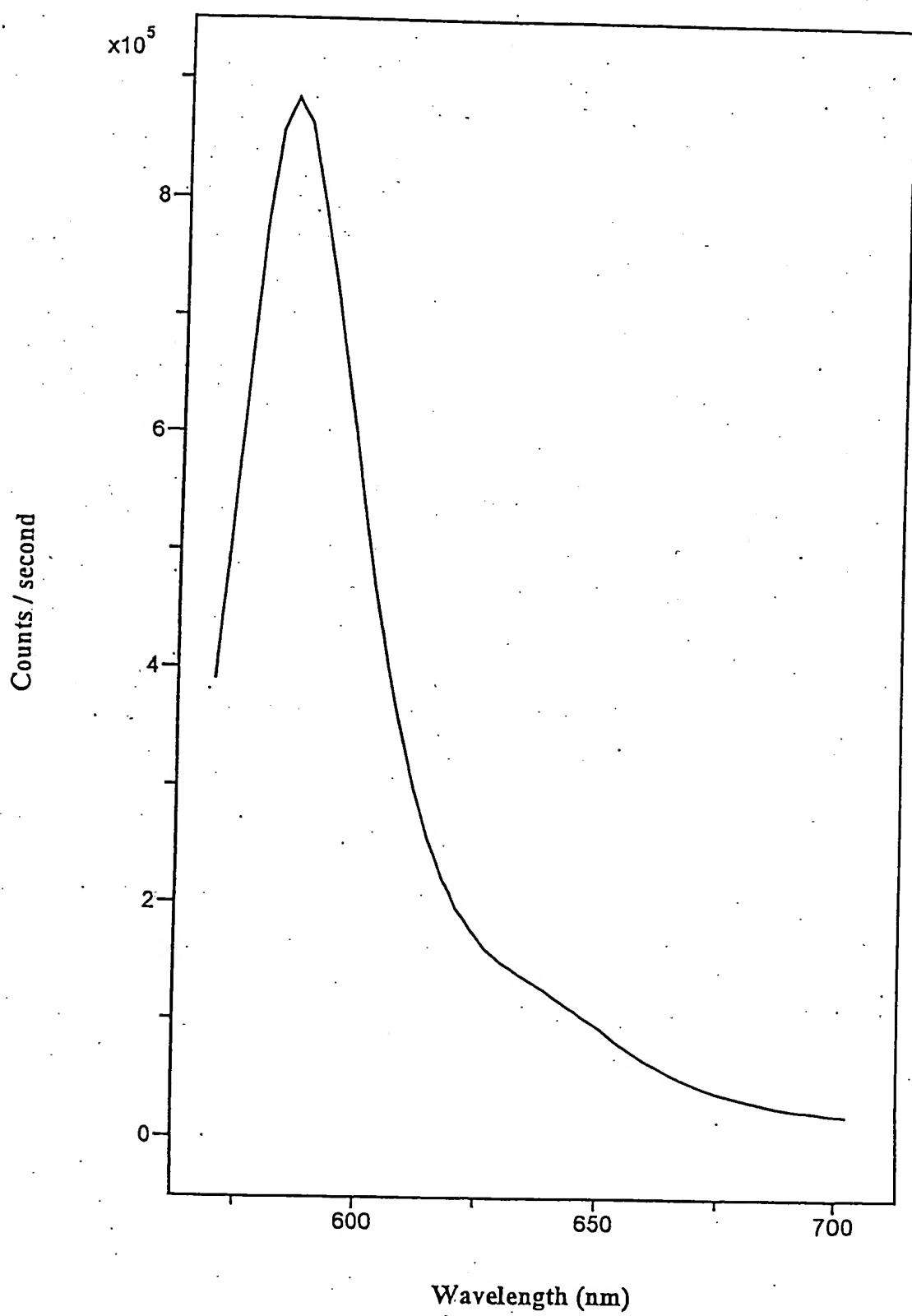


Figure 8

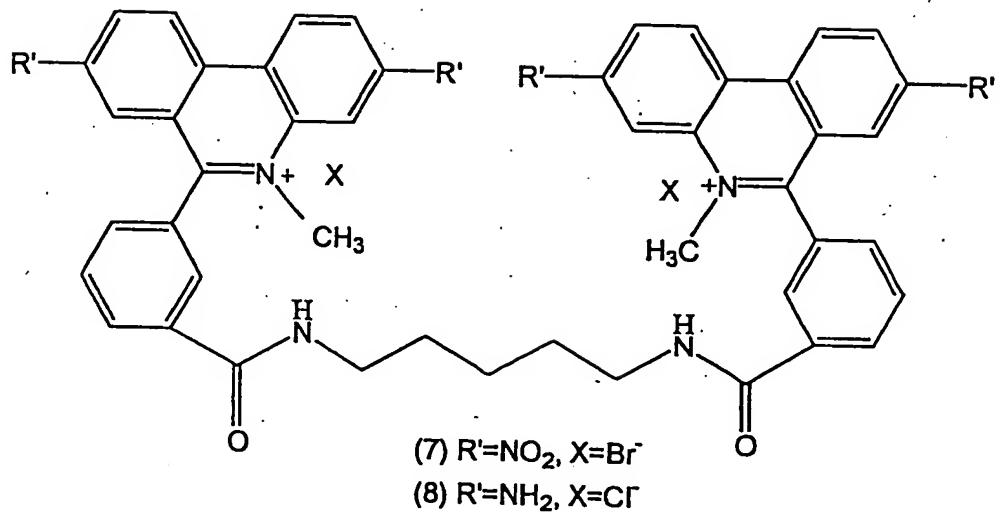
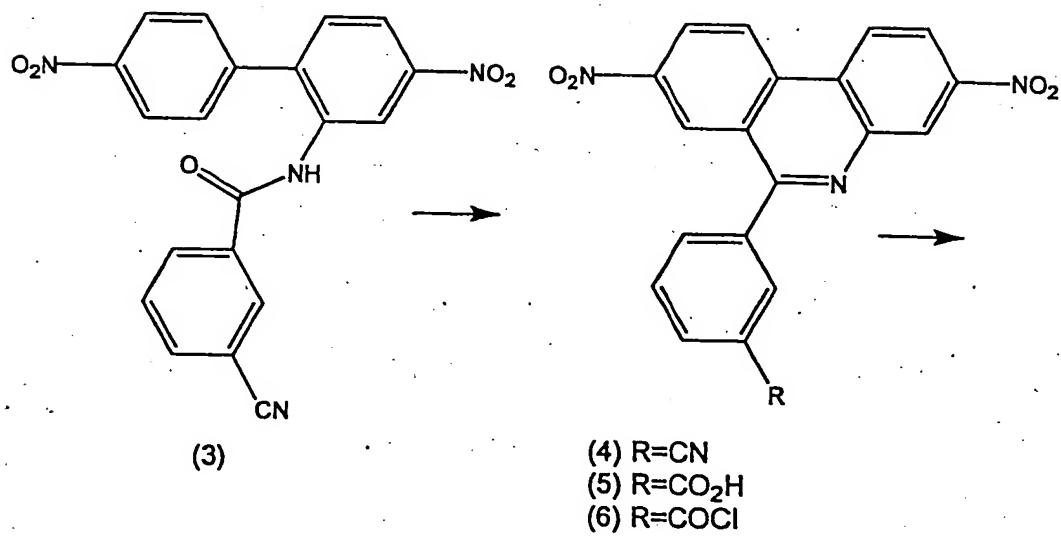
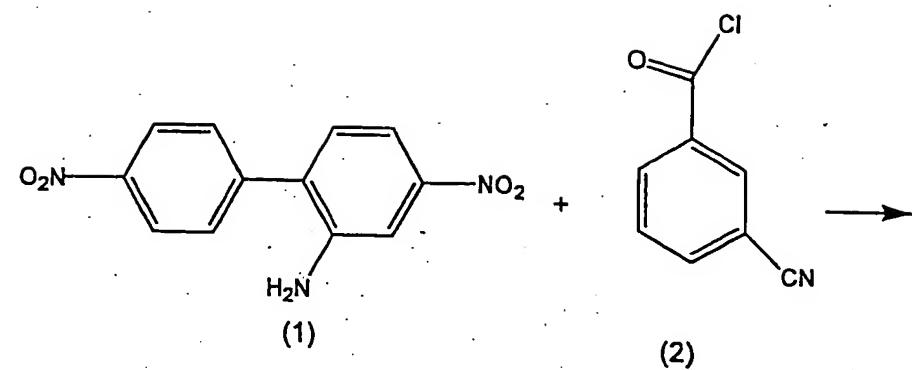
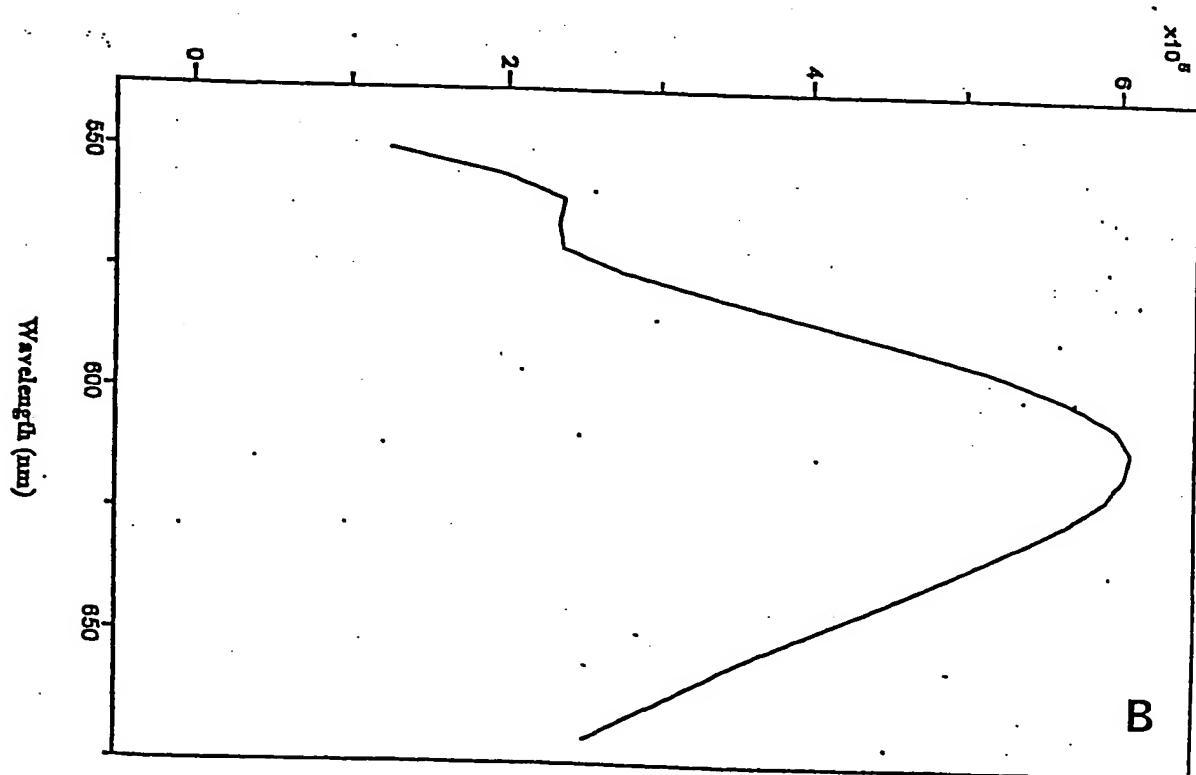
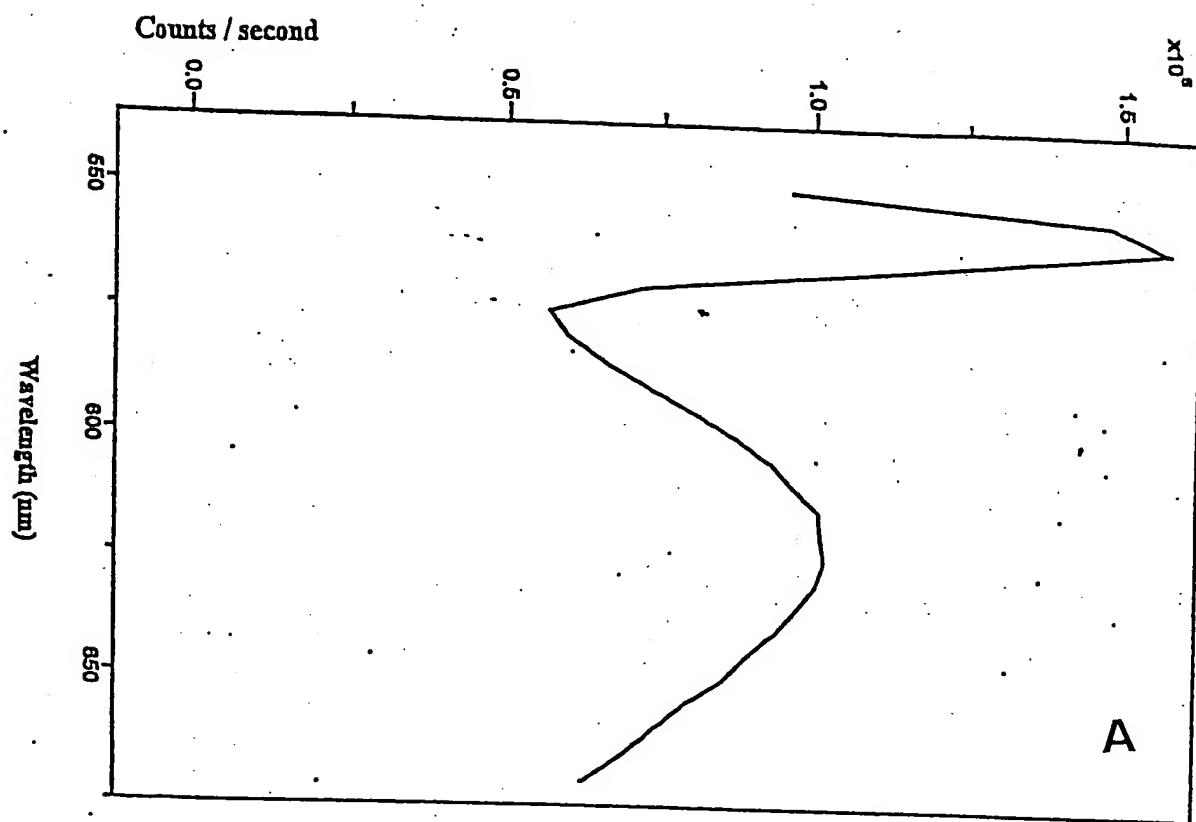


Figure 9



Illumination at 472 nm
Figure 10

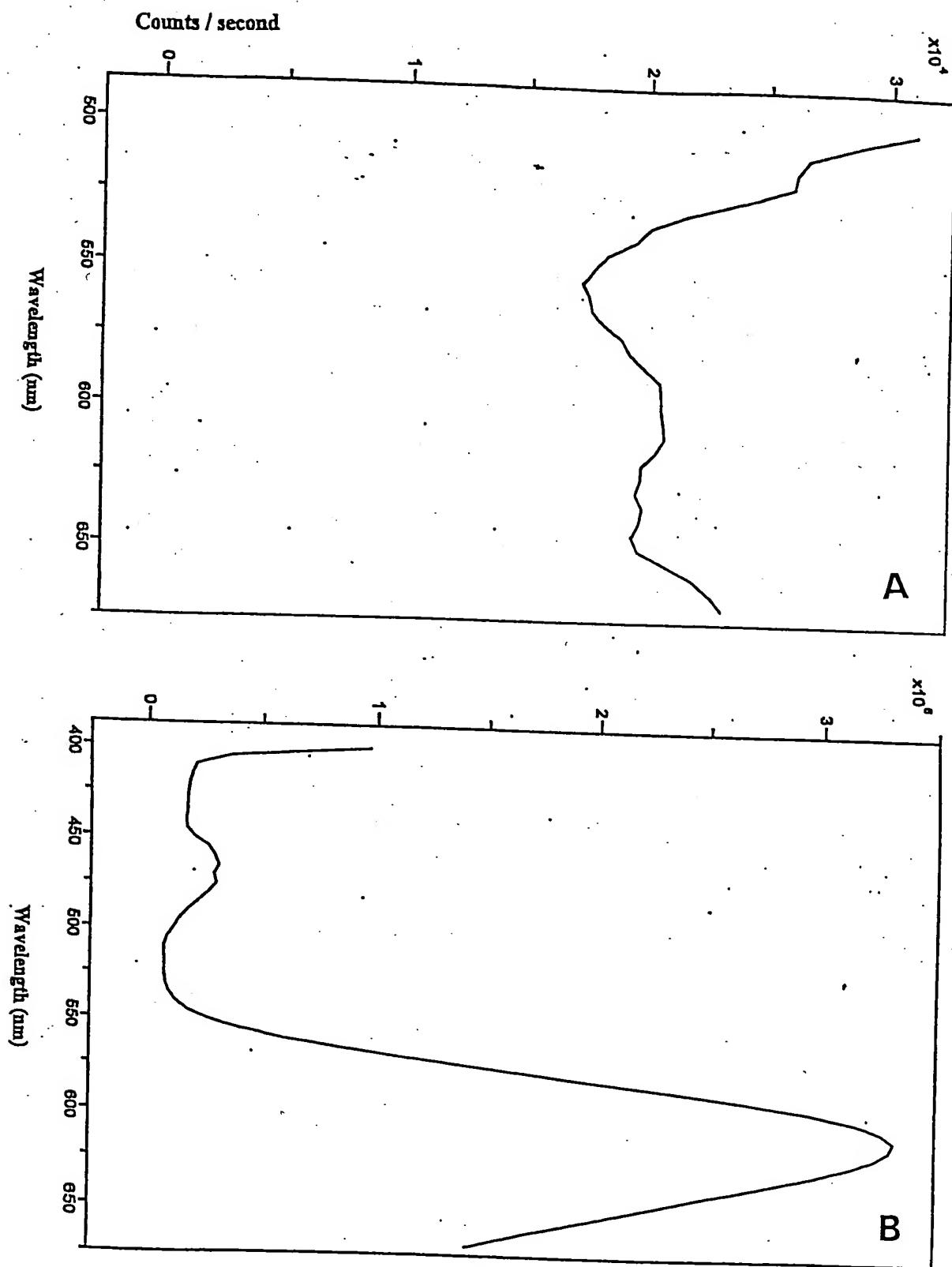


Figure 11

HIV Anti-sense Amplicon

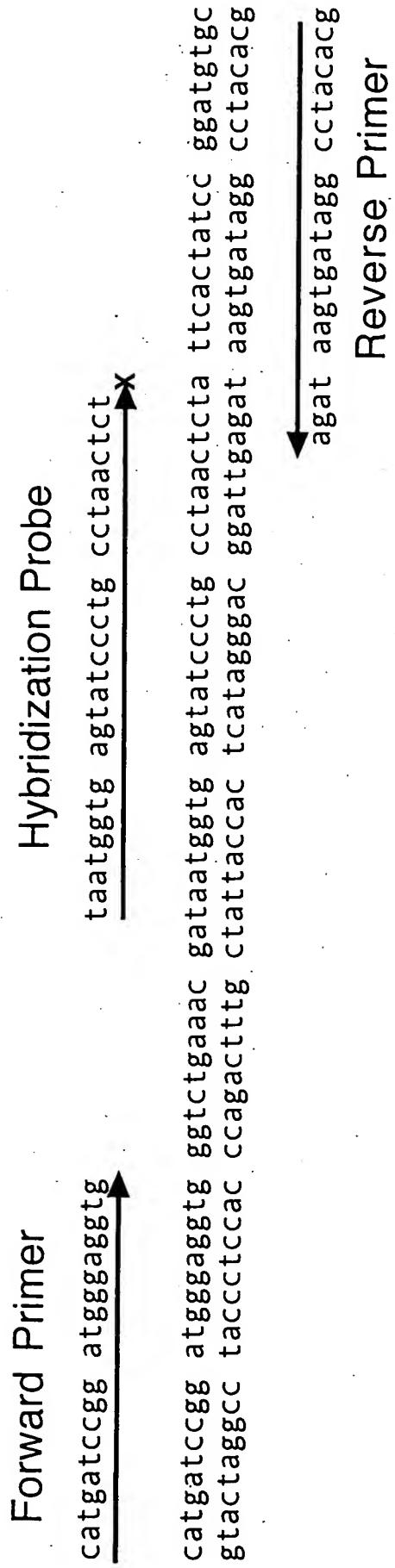
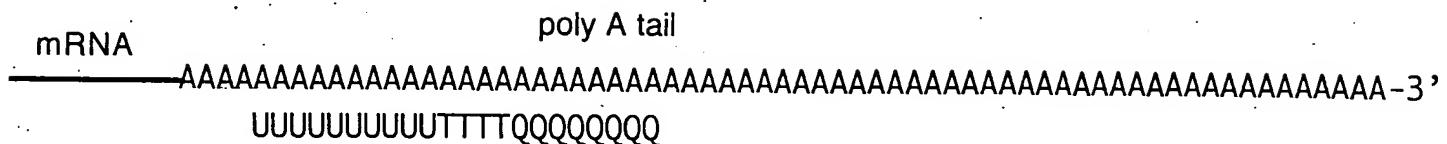


Figure 12

A) Binding of CNAC to poly A tail



CNAC

U = Uridine (ribonucleotide)

T = Thymidine (deoxyribonucleotide)

Q = Inosine (ribonucleotide)

B) elimination of poly A segment by RNase H

RNase H

mRNA

AAAAAAAAAAA-3'

UUUUUUUUUUTTTQQQQQQQ

CNAC

C) Incorporation of primer binding site by template dependent extension of analyte

Reverse Transcriptase

mRNA

AAAAAAAAAAAAACCCCCCCC-3'

UUUUUUUUUUTTTQQQQQQQ

CNAC

D) Removal of CNAC and binding of primer with promoter sequence

mRNA

GGGGGGGG-promoter-5'

AAAAAAAAAAAAACCCCCCCC-3'

Figure 13

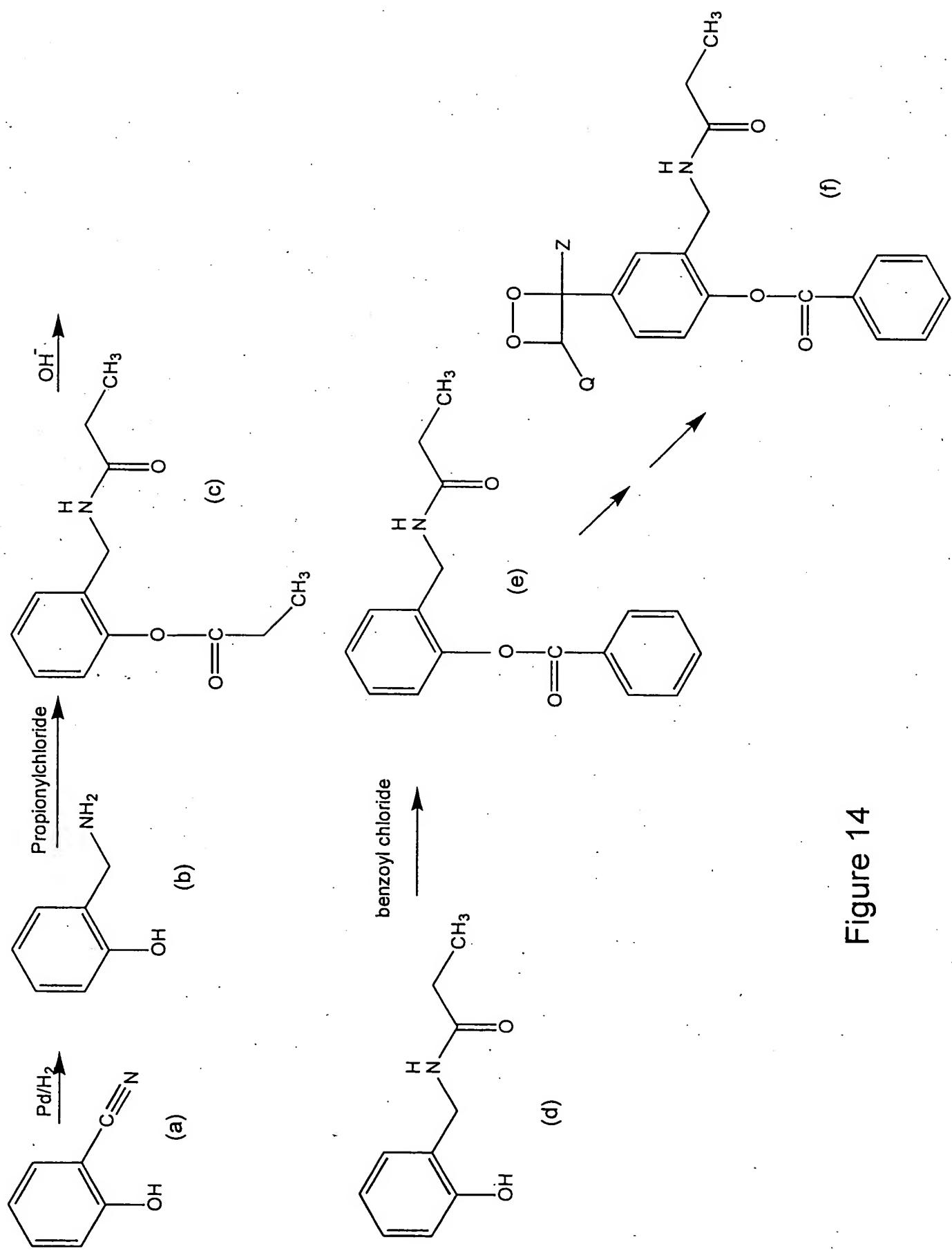


Figure 14

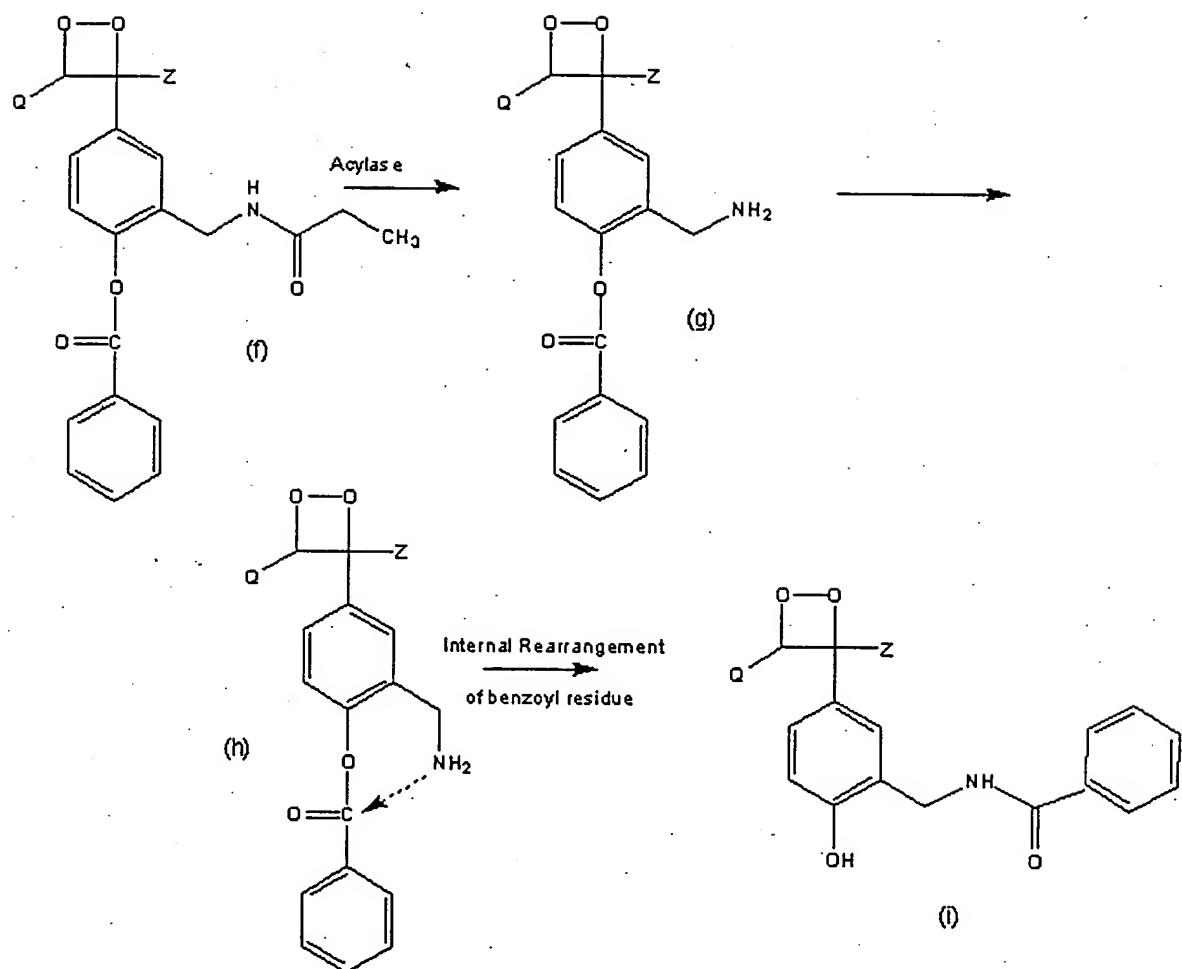


Figure 15